B' cont'd

a third doped region formed in said second doped active layer beneath said isolation region.

16. (Amended) The diode according to claim 1, further comprising a fourth doped active layer at least partially within said first doped active layer.

17. (Amended) The diode according to claim 16, wherein said fourth doped active layer is spaced away from the edge of said first doped active layer.

18. (Amended) The diode according to claim 16, wherein said fourth doped active layer is an n-type region.

19. (Amended) The diode according to claim 16, wherein said fourth doped active layer is doped at a dopant dose of from about $1x10^{12}$ ions/cm^2 to about $1x10^{16}$ ions/cm^2.

B2

20. (Amended) The diode according to claim 9, further comprising a fourth doped active layer at least partially within said first doped active layer.

21. (Amended) The diode according to claim 20, wherein said fourth doped active layer is spaced away from the edge of said first doped active layer.

22. (Amended) The diode according to claim 20, wherein said fourth doped active layer is an n-type region.

23. (Amended) The diode according to claim 20, wherein said fourth doped active layer is doped at a dopant dose of from about $1x10^{12}$ ions/cm^2 to about $1x10^{16}$ ions/cm^2.

28. (Amended) A diode for use in an imaging device, said diode comprising:

B3

an isolation region formed in a substrate;

B3 cont'd

a first doped active layer of a first conductivity type formed in said substrate, said substrate being of a second conductivity type, wherein said first doped active layer is spaced apart from said isolation region;

a second doped active layer of said first conductivity type formed within said first doped active layer, wherein said second doped active layer is doped to a higher dopant dose than said first doped active layer, wherein said first active layer and said substrate form a p-n junction; and

a third doped region proximate to a lower boundary of said isolation region.

B4

50. (Amended) An imager device comprising:

(i) a processor; and

(ii) an imaging device coupled to said processor, said imaging device comprising:

a photodiode for use in said imaging device, said photodiode comprising:

an isolation region formed in a substrate;

a first doped photoactive layer of a first conductivity type formed in said substrate, wherein said first doped layer is spaced apart from said isolation region;

a second doped photoactive layer of a second conductivity type disposed in contact with said first doped photoactive layer, the contact of said first and second photoactive layers forming a p-n junction; and

a third doped region formed in said second doped photoactive layer beneath said isolation region.

B5

67. (Amended) An imager device comprising:

(i) a processor; and

(ii) an imaging device coupled to said processor, said imaging device comprising:

a photodiode for use in an imaging device, said photodiode comprising:

an isolation region formed in a substrate;

a first doped photoactive layer of a first conductivity type formed in said substrate, said substrate being doped to a second conductivity type, wherein said first doped photoactive layer is spaced apart from said isolation region;

B5 Cont'd

a second doped photoactive layer of said first conductivity type formed within said first doped photoactive layer, wherein said second doped photoactive layer is doped to a higher dopant dose than said first doped photoactive layer, wherein said first photoactive layer and said substrate form a p-n junction; and

a third doped region formed in said substrate beneath said isolation region and spaced apart from said first photoactive layer.